CHAPTER 1

AFLOAT AND ASHORE FUELS DIVISION ORGANIZATION

Advancement . . . are you ready? Did you study enough? Did you study the correct manuals? Many did; others didn't; and some just don't know.

Everyone should be well aware of the personal advantages of advancement: higher pay, greater prestige, more interesting and challenging work, and the satisfaction of getting ahead in your chosen field.

The Navy also profits by your advancement. Highly trained personnel are essential to the functioning of the Navy. By advancing, you increase your value to the Navy in two ways: First, you become more valuable as a person who can supervise, lead, and train others. Second, you become more valuable as a technical specialist.

The primary purpose of this training manual is to aid personnel in meeting the professional (technical) qualifications for advancement in the Aviation Boatswain's Mate (Fuels) rating. A secondary purpose is to help improve job skills. You can achieve these goals through use of this manual as a study aid along with on-the-job training.

The information contained in this manual is based on the occupational standards for the ABF rating, which are found in *Aviation Boatswain's Mate, Fuels (ABF) Advancement Handbook For Petty Officers,* NAVEDTRA 71201. Take note that occupational standards are regularly evaluated and updated and any changes that occurred after March 1993 may not be reflected in this manual. **Always** check with the education services officer when preparing for advancement to make sure you meet the current requirements.

This chapter will explain the purpose of training manuals and nonresident training courses. It also will describe the ABF rating, the organization of afloat and ashore commands, and the responsibilities of various parts of each command.

TRAINING MANUALS AND NONRESIDENT TRAINING COURSES

LEARNING OBJECTIVE: Define the relationship between the ABF TRAMAN and specific occupational standards.

Training manuals (TRAMANs) are written to provide minimum coverage of rating-specific Occupational Standards. TRAMANs are also written to cover Naval Standards (MRPO1), which are the responsibilities of all Navy ratings. A TRAMAN may address a single rate *(AK3),* multiple rates *(AO 3&2),* or portion of a rating *(BM, volume 1).* It may also be a generic manual that may be used by several ratings *(Basic Machines).* This manual, *Aviation Boatswain's Mate (Fuels),* will cover paygrades E-4 through E-7 in the ABF rating.

Nonresident Training Courses (NRTCs) are self-study courses that may include assigned exercises, lessons, or examinations designed to aid the student in gaining the knowledge or skills described in the associated text. This ABF TRAMAN will have two NRTCs: one for *ABF 3&2,* and one for *ABF 1&C.*

AVIATION BOATSWAIN'S MATE RATING

LEARNING OBJECTIVE: Identify the path for advancement in the AB rating. Describe the ABF rating.

The Aviation Boatswain's Mate rating is divided into three service ratings in paygrades E-4 through E-8. The service ratings are Aviation Boatswain's Mate H (Aircraft Handling), Aviation Boatswain's Mate E (Launch and Recovery Equipment), and Aviation Boatswain's Mate F (Fuels). The general rating, AB, applies at the E-9 level only.

Figure 1-1 illustrates paths of advancement for an Airman Recruit to Master Chief Aviation Boatswain's Mate, Commissioned Warrant Officer (W-4), and Limited Duty Officer. Shaded areas show career stages where qualified enlisted personnel may advance to Commissioned Warrant Officer (W-2), and Limited Duty Officer.

Personnel in the ABF rating operate, maintain, and perform organizational maintenance on aviation fueling, automotive gasoline (MOGAS), and lubricating oil systems on CVs, CVNs, LHAs, LPHs, and LPDs. Included are aviation fuel, MOGAS, and catapult lubricating oil service stations and pumprooms, piping, valves. pumps, tanks, and portable equipment related to the fuel system. ABFs also operate, maintain, and repair the valves and piping of purging and protective systems within the Air Department spaces aboard ship.

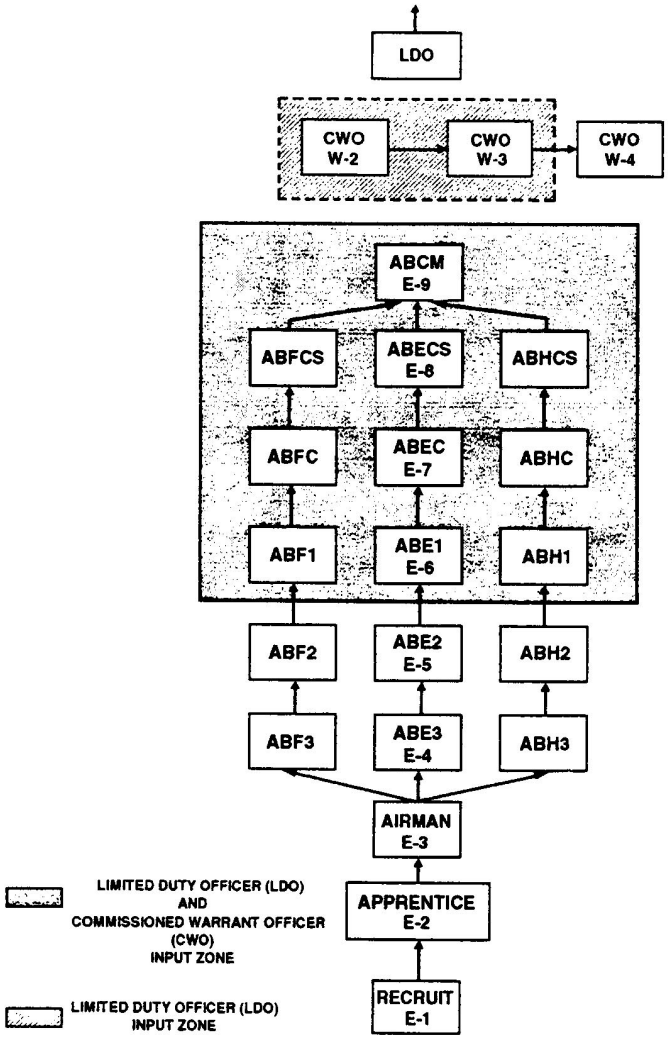

Figure 1-1.—Paths of advancement.

Additionally, ABFs operate and service motorized fueling equipment, maintain quality surveillance, and supervise the operations and servicing of fuel farms and equipment associated with the fueling and defueling of aircraft ashore.

They also may train, direct, and supervise fire-fighting crews, fire rescue teams, and damage control parties in assigned fuel and catapult lubricating oil spaces. And they **ALWAYS** observe and enforce fuel-handling safety precautions.

AVIATION FUELS DIVISION AFLOAT

LEARNING OBJECTIVE: Describe the organization and responsibilities of the major work-centers of a typical Aviation Fuels Division Afloat.

Figure 1-2 illustrates the typical AvFuels Division Afloat organization. However, it must be emphasized that you will encounter many variations of AvFuels Divisions. This is due to the many different types of ships used by the Navy that have the capability of fueling and defueling aircraft.

The variations you will see in the organization of a division include the number of personnel assigned to the division, the number and types of aircraft embarked, and the tactical employment of your ship. You may also encounter slightly different organizations even on the same-class ships. Regardless of the type of ship, keep in mind that the basic mission of the division remains the same; therefore, the basic division structure does not change.

The AvFuels Division Afloat is normally made up of the V-4 Division Office, the Flight Deck workcenter (which includes flight deck repair and the quality surveillance lab), and the Below Decks workcenter. Some divisions will have a maintenance workcenter that combines the maintenance and repair of the flight and below decks workcenters. Most will have a Damage Control workcenter. Again, it depends on the needs and manning of the command.

Another integral part of the AvFuels Division Afloat is the Aviation Fuels Security Watch. This watch is stood 24 hours a day when the ship is not at flight quarters. Personnel standing this watch must be properly trained, familiar with the AvFuels system, and fully PQS-qualified as an AvFuels Security

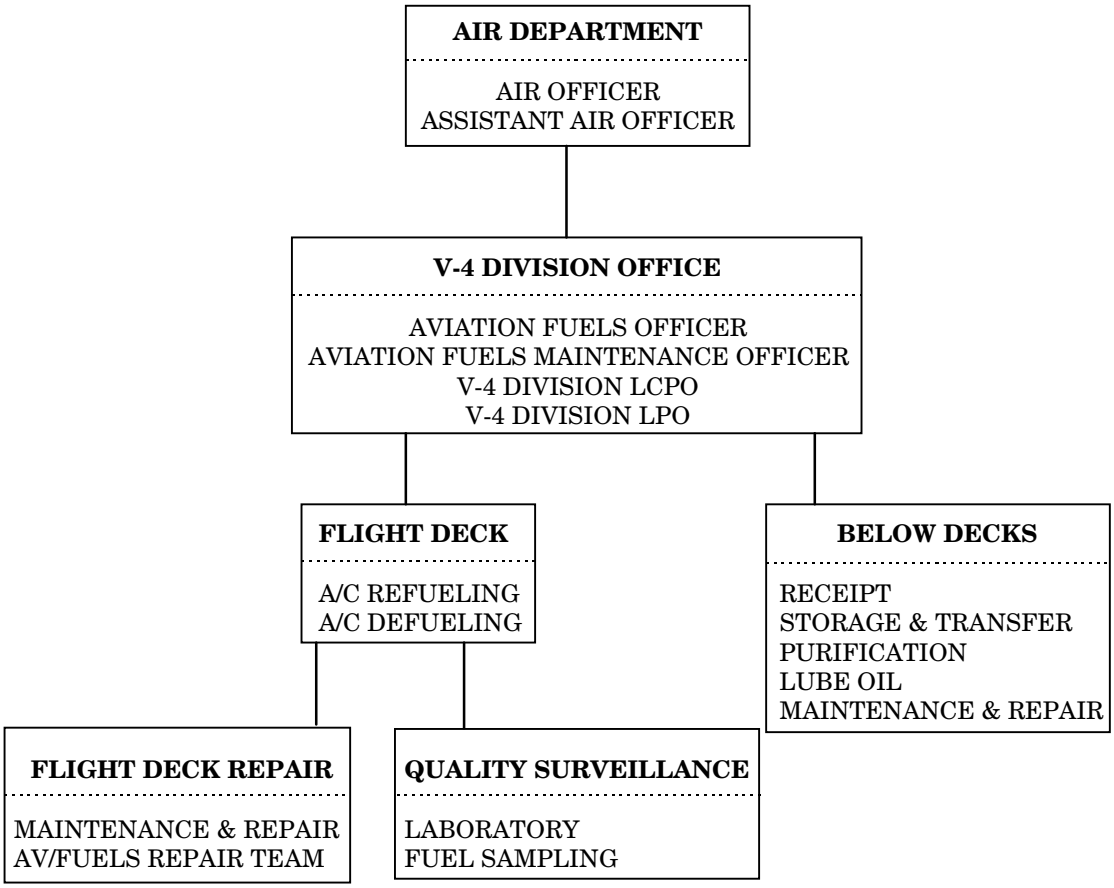

Figure 1-2.—Typical Aviation Fuels Division Afloat.

Watch. Every effort should be put forth by senior ABFs to make sure watchstanders understand the importance of this watch. The AvFuels security watch is responsible for the security of the AvFuels system, and ultimately, the ship.

V-4 DIVISION OFFICE

The V-4 Division Office is the administrative core of the AvFuels Division Afloat. The AvFuels division officer, AvFuels maintenance officer, leading chief petty officer, leading petty officer, and divisional yeomen work in this office.

FLIGHT DECK

The Flight Deck workcenter is responsible for the refueling and defueling of aircraft and for support equipment on the flight and hangar deck.

Flight Deck Repair

Flight Deck Repair is responsible for the maintenance and repair of the flight- and hangar-deck refueling stations and portable defueling equipment. Repair personnel also man sponsons during underway replenishment and perform damage control duties as the Aviation Fuels Repair Team.

Quality Surveillance Laboratory

The Quality Surveillance Laboratory is responsible for the monitoring of fuel quality in the entire AvFuels system. Lab personnel do extensive sampling and testing. While it is a branch of the flight deck workcenter, the lab is also responsible for testing fuel samples sent from Below Decks.

BELOW DECKS

The Below Decks workcenter is responsible for the receipt, stripping, transfer, purifying, and filtering of aviation fuels and catapult lubricating oils. In most

divisions, below decks personnel do their own maintenance and repairs.

PERSONNEL QUALIFICATION STANDARDS

LEARNING OBJECTIVE: Describe the purpose of the PQS program. Identify the PQS watch stations for Aviation Fuels Afloat.

No matter what your job assignment is in V-4 Division, you must be qualified or under direct supervision by a qualified person, to perform that assignment. The PQS Program is used to qualify officer and enlisted personnel to perform their assigned duties. It is a written compilation of the knowledge and skills required to qualify for a specific watchstation, maintain specific equipment, or perform as a team member within your unit.

As the organization may vary from ship to ship, PQS will too. The PQS for Aviation Fuels Afloat can be tailored to fit any ship by adding items that are unique to, or deleting items that do not apply to your system.

Listed below are the current watchstations (job assignments) in the PQS for Aviation Fuels Afloat:

4301	Sound-Powered-Telephone Talker/ Operator
4302	Fuels Security Watch
4303	Refueling Crewman
4304	Checker
4305	Refueling Crew Leader
4306	Control Talker
4307	Quality Control Sentry
4308	Quality Control Supervisor
4309	Aviation Fuels Repairman
4310	Aviation Fuels Repair Supervisor
4311	Catapult Lube Oil Operator
4312	JP-5 Filter Operator
4313	JP-5 Pumproom Operator
4314	JP-5 Console Operator
4315	JP-5 Pumproom Supervisor
4316	Flight Deck Supervisor
4317	Below Decks Supervisor
4318	Division Supervisor

For complete information on the PQS for ABFs, consult *PQS for Air Department Aviation Fuels Afloat,* NAVEDTRA 43426-4A.

AVIATION FUELS DIVISION ASHORE

LEARNING OBJECTIVE: Describe the organization and responsibilities of the major branches of a typical Aviation Fuels Division Ashore.

Figure 1-3 illustrates the typical Aviation Fuels Division Ashore organization. The various air stations operated by the Navy differ considerably in size, arrangement, and mission. Therefore, the organization and operation of fuels divisions ashore will vary from station to station even more than afloat commands.

The AvFuels Division Ashore is a division of the Supply Department. Its typical organization is Fuels Management Officer (FMO). Administrative/Accounting, Distribution, Storage, and Quality Control.

FUELS MANAGEMENT OFFICER (FMO)

The FMO discharges the supply officer's fuel responsibilities through the planning, directing, training, and supervision of the fuel operations. Directly responsible to the FMO is administration and accounting.

DISTRIBUTION

Distribution is responsible for providing refueling and defueling services for all tenant and transient aircraft and other units such as fuel test cells at the air activity. An additional significant responsibility is performing operator maintenance on refueling equipment used by distribution personnel. Distribution will normally contain most of the military personnel assigned to the division.

QUALITY CONTROL

Quality Control is responsible for the inspection and quality assurance of ALL fuels received or issued by the fuel farm. Fuel samples taken from all stages of fuel-handling operations are delivered to Quality Control. They are also responsible for checking filter/separators and fuel monitors, and maintaining pres-

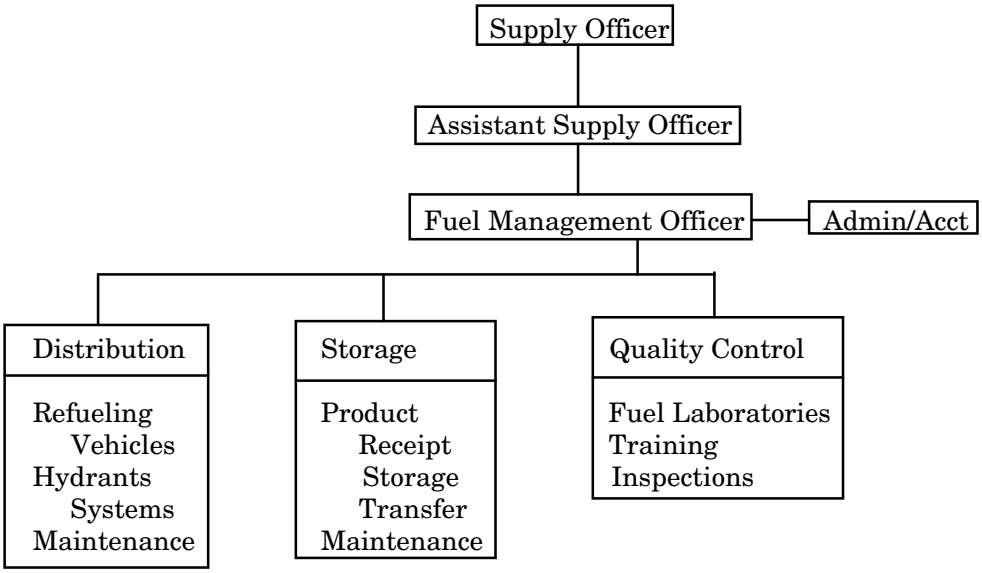

Figure 1-3.—Typical Aviation Fuels Division Ashore.

sure differential records for filter/separators and fuel monitors.

STORAGE

Storage is responsible for the receipt, storage, and transfer of all fuels handled by the division. Included with these responsibilities is maintenance of equipment used in transfer operations.

SUMMARY

In this chapter, you learned the purpose of a training manual and its accompanying nonresident training course. You also learned the relationship of a TRAMAN with specific occupational standards. You reviewed the paths for advancement in the AB rating and studied the PQS for Aviation Fuels Afloat.